

The Examiner argues that there is no criticality shown in the specification of the use of the thermometer only with a wine bottle, and that, according to the present invention, the Yata et al. nursing bottle could be a wine bottle according to the invention.

I submit that a skilled reader would a) understand from the specification that wine bottles were associated with the greatest advantages according to the present invention, and b) would certainly not believe that Yata et al. disclose a wine bottle, and would not agree that the term “wine bottle” is MERELY a functional term - in fact “wine bottle” is a specific well-recognised term of art in the field of the skilled person – a term of art entirely consistent with how “wine bottle” is used in the present specification – and is in fact a specific term rather than a functional term.

- a) Please note although the invention is described in places in general terms, it cannot be disputed that all specific embodiments of the invention, all examples and all preferred embodiments of the invention are all directed to wine bottles – and this was my intention on filing. Furthermore, as described in my submission of 4th November 2008 there are particular advantages of the invention in the context of wine bottles which would not have been apparent to a skilled person from the prior art. In support of this submission, please refer to the following sections of the application as filed:

- Examples page 15 – Examples of different types of devices of the invention are all in respect of wine bottles – see line 12.

- Examples page 16 – the first series of experiments is introduced on line 23 onwards with the exacting standards required in measuring wine temperature accurately, and the experiment goes on to analyse the method of the invention with a Burgundy wine bottle (page 17).

- All conclusions are made with reference to utility with different wine bottles (Burgundy/Loire/Rhone/Champagne/Bordeaux/Condrieu) – page 21 lines 5, 16-18, 31-33, page 23 lines 3-31.

- The problems overcome with the present invention relate to wine bottles – see page 18 line 33 to page 19 line 7 – the differential in wine temperature from top to bottom when it is cooled in an upright position can be up to 7-8 °C, yet the methods of the present invention surprisingly still give a very good estimate for the average temperature of the wine (i.e. the mixed wine temperature when dispensed) – which is a significant advantage given that for a workable wine thermometer the temperature can conveniently only be measured at one position on the bottle.

- Abstract of the invention – states that the invention particularly relates to wine bottles.

- The Background to the Invention (page 1 and 2) is entirely focused on wine thermometers, and the known problem of measuring average wine temperature accurately. We are then led into the description of the invention on page 2 line 22 that states “*The present invention aims to alleviate the above [wine related] problems by presenting a device that can measure the temperature of the contents of a container such as a wine bottle without disturbing the contents...*”

- Page 2 lines 34-36 make it clear that glass wine bottles are particular specific embodiments of the invention: “*Thus according to the invention there is provided a device for externally estimating the temperature of the liquid*

contents of a (preferably sealed) container (particularly glass containers such as wine bottles) with a concave base..."

- Page 3 lines 19-23 describe the concave base of the invention in relation to wine bottles such as a Riesling or a Condrieu bottle – in no sense is the term “wine bottle” being used generically or functionally.

- Page 4 lines 11-14 describe what “thermally-enclosed” means in relation to a wine-bottle where there are “*small ridges often present on the base of the bottle*” – again “wine bottle” is used specifically and not functionally. See also lines 32-33 where specific structural features of “wine bottles” are discussed.

- Page 5 lines 1-4 discuss that the size of the device is appropriate to fit various “wine bottles”. Again reference is made to specific Alsace, Burgundy, Bordeaux and champagne designs and is not given any generic functional definition.

- In summary, though in its broadest description generic language is used, there can be no doubt that this invention is focused on wine bottle thermometers, and that this is where the heart of the invention lies. Furthermore the term “wine bottle” is always used in relation to the specific conventional design of wine bottle that is understood by the skilled person and is never used in a generic or functional way.

- b) Furthermore, the term “wine bottle” is a term of art well recognised by a relevant skilled person. It is entirely artificial to believe anything else. The inventor refers to wine bottles of the invention as being glass (see page 2 lines 35-36) and of the traditional design –such as the Burgundy design (page 17) or Champagne, Bordeaux or Condrieu designs (page 23). This strikes a chord with the skilled reader that the term “wine bottle” should take its normal, conventional meaning – the classical glass bottle that has been used for storing and ageing wine for hundreds of years. They could in no way mistake the “nursing bottle” of Yata et al. for their understanding of what a “wine bottle” is. To further support this submission, please refer to the following online wine guides and information written by skilled people of the wine field to show that what they understand by this term is particular in nature and not functional as the examiner currently believes:

- <http://winesediments.net/2006/11/26/wine-bottle-evolution/> - discusses the fact that “*Today’s wine bottles are typically derivative of French styles. Bordeaux wines are generally found in high-shouldered bottles that allow sediment to be trapped while pouring. Burgundy wines are in sloped bottles, and Champagne bottles are thicker and shaped to allow for the extra pressure from the carbonated wine. In fact, without the indentation on the bottle of the bottle (the “punt”), the bottom of a champagne bottle wouldn’t be able to take the pressure! Most new world wines follow similar patterns, though that’s not always the case. Color is actually very important in a wine bottle, too; in fact, it’s more important than the shape. Color in the glass can help protect the wine from damage due to ultraviolet light. With cellaring in protected areas, though, color takes on less significance.*” A wine bottle therefore is a particular term of art.
- <http://www.thewinedoctor.com/advisory/buystorebottlesizes.shtml> - discusses “*Whereas it isn’t really necessary to have any knowledge of*

wine bottles in order to appreciate wine, the bottles are vitally important. A glass bottle, sealed with a cork or other device, is undoubtedly preferable for the storage and transport of wine than the alternatives, which once included wooden barrels, amphorae or even animal skins. Glass is inert, and together with the cork seal (putting aside the terrible problem of cork taint just for one moment) it provides an excellent environment for the long ageing that some wines demand. The colouring of the glass also aids, in a small way, in the protection of the wine from potentially damaging light, although of course there's no substitute for storing your wine in a cool, dark cellar."

- <http://www.cellarnotes.net/bottleshapes.html> - states "The shape of wine bottles can communicate a great deal about the taste of the wine inside. In Europe, many wine producing areas developed unique wine bottle shapes that became the traditional bottle for wines of that region. As winemaking spread around the world, new wineries often adopted those traditional European bottle shapes in order to communicate with their consumers."
- <http://www.wineintro.com/history/glassware/general.html> - gives a history of the wine bottle culminating "In 1979 the US set a requirement that all bottles be exactly 750ml as part of the push to become Metric. That is almost exactly the same amount of alcohol as an "American Fifth". Around the same time the European Union also asked winemakers to settle on one size to help with standardization. The 750ml size has become adopted by many countries, so the winemakers could ship to the US with ease."
- <http://www.wineintro.com/history/glassware/oldbottle/> - discusses "One of the biggest changes in wine storage and enjoyment was the invention of glass in the days of the Roman Empire. Glass is non-reactive and can store wine for decades without altering its flavor. Suddenly wine bottles and glasses were used everywhere to preserve and drink wine. Cork was found to be the best material to stuff in the bottle's opening, to keep out the air but be easily removable later on when it was time to drink the wine."

- c) Thus in general the term "wine bottle" would be understood by a skilled person to be made of glass (suitably thick for long-term storage), to be sealable for many years, to narrow substantially towards the neck (to aid sealing), to be of standard dimensions, and typically to have a concave base (or punt). And it is in this same specific way that the term "wine bottle" is used in the present specification, and this was the way the European Patent Office interpreted this term in their analysis of the equivalent granted case in Europe over the same Yata et al. disclosure. Given the above it is requested that the Examiner reconsiders her view that a person of skill in the art in the wine field could think that the Yata et al. nursing bottle could be a wine bottle of the present invention.

The sole question that remains is whether the methods of the claims concerning wine bottles are obvious over the nursing bottle of Yata et al. This has been addressed in detail on pages 2-4 of my last submission of 4th November 2008 – comments which the Examiner has not addressed to date. The submission outlines the advantages of the present invention in the wine field, and how a skilled person would have doubted that

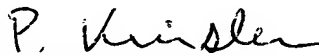
the Yata et al. disclosure would have functioned well enough to be applied to the accurate measurement of wine temperature (with the level of accuracy required), and (absent knowledge of the present invention) would have doubted that the Yata et al. device would work to show an accurate average temperature of the contents of an unshaken wine bottle. Furthermore the skilled person would have disregarded Yata et al. due to the snap-fit base to bottle nature of the disclosure – clearly this would not be appropriate for wine bottles which cannot snap fit and which are of a variety of base diameters.

Finally, in respect to the Examiner's reference to FR 2749654 A3, the Examiner seems to maintain her objection without saying why this document is relevant to the present invention given the inventor's last submission. This document in fact only discloses the placement of a temperature sensor towards the bottom of a wine bottle on the outside surface, and not within the concave base of the bottle and is not relevant in any way, except being further evidence that in all the decades that skilled people have been seeking to make wine thermometers no-one had advocated the use (or realised the advantages) of using the concave base of the bottle for such measurement.

Given the above submission it is requested that the Examiner reconsiders her view on what the term "wine bottle" means to a person of skill in the art. In my submission the present invention describes a significant advance in the measurement of accurate wine temperature after decades of research.

Your kind attention and reconsideration is requested. I would be very willing to speak to the Examiner by phone if this may help advance prosecution.

Respectfully submitted,



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